

CLAIMS

What is claimed is:

- 1 1. A method comprising:
 - 2 referencing an electronic file to determine whether a network layer address providing
 - 3 server interface and a router interface are on the same subnet;
 - 4 determining configuration information for the network layer address providing server
 - 5 interface based, at least in part, on information in the electronic file; and
 - 6 determining configuration information for the router interface based, at least in part,
 - 7 on information in the electronic file.
- 1 2. The method of claim 1, wherein the network layer address providing server interface
- 2 is a Dynamic Host Configuration Protocol (DHCP) server interface.
- 1 3. The method of claim 2, wherein referencing the electronic file to determine whether
- 2 the Dynamic Host Configuration Protocol (DHCP) server interface and the router interface
- 3 are on the same subnet further comprises:
 - 4 creating a virtual memory map based on the referenced electronic file; and
 - 5 analyzing the virtual memory map to determine whether the Dynamic Host
 - 6 Configuration Protocol (DHCP) server interface and the router interface are on the same
 - 7 subnet.
- 1 4. The method of claim 1, wherein referencing the electronic file comprises:
 - 2 referencing an electronic list of network components having a standardized syntax.

1 5. The method of claim 4, wherein the electronic list of available network components
2 includes addressing scheme information to identify an addressing scheme for the listed
3 network components.

1 6. The method of claim 1,
2 wherein the network layer address providing server interface is a DHCP server
3 interface; and
4 wherein automatically determining configuration information for the DHCP server
5 interface based, at least in part, on information in the electronic file comprises:
6 determining an IP address of the DHCP server interface.

1 7. The method claim 6, wherein determining configuration information for the DHCP
2 server interface based, at least in part, on information in the electronic file comprises:
3 determining a gateway IP address for the subnet.

1 8. The method of claim 1, wherein automatically determining configuration information
2 for the router interface based, at least in part, on information in the electronic file comprises:
3 determining an IP address of the router interface.

1 9. The method of claim 1,
2 wherein the network layer address providing server interface is a DHCP server
3 interface; and
4 further comprising:
5 programmatically configuring the DHCP server with the determined configuration
6 information.

1 10. The method of claim 9, wherein programmatically configuring the DHCP server with
2 the determined configuration information comprises:

3 calling a function to interact with the DHCP server and change its state.

1 11. The method of claim 10, wherein calling the function to interact with the DHCP
2 server and change its state comprises:

3 passing the determined IP address of the DHCP server interface and the determined
4 gateway IP address to the DHCP server.

1 12. The method of claim 1, further comprising:

2 programmatically configuring the router with the determined configuration
3 information.

1 13. The method of claim 12, wherein programmatically configuring the router with the
2 determined configuration information comprises:

3 calling a function to interact with the router and change its state.

1 14. The method of claim 13, wherein calling the function to interact with the router and
2 change its state comprises:

3 passing the determined IP address of the router interface to the router.

1 15. A network comprising:

2 a router having a router interface associated with a subnet;

3 a DHCP server having a DHCP interface associated with the subnet; and

4 a node coupled with the router and the DHCP server and having a processor and logic
5 executable thereon to

6 reference an electronic file to determine whether a DHCP server
7 interface and a router interface are on the same subnet; and
8 determine configuration information for the DHCP server interface
9 based, at least in part, on information in the electronic file; and
10 determine configuration information for the router interface based, at
11 least in part, on information in the electronic file.

1 16. The network of claim 15, wherein the referenced electronic file comprises a list of
2 network components having a standardized syntax.

1 17. The network of claim 16, wherein the electronic list of network components includes
2 addressing scheme information to identify an addressing scheme for the listed network
3 components.

1 18. The network of claim 15, wherein the node coupled with the router and the DHCP
2 server and having a processor and logic executable thereon to automatically determine
3 configuration information for the DHCP server interface based, at least in part, on
4 information in the electronic file comprises logic executable to
5 determine an IP address of the DHCP server interface; and
6 determine a gateway IP address for the subnet.

1 19. The network of claim 15, wherein the node coupled with the router and the DHCP
2 server and having a processor and logic executable thereon comprises logic executable
3 thereon further to
4 programmatically configure the router with the determined configuration information;
5 and to

6 programmatically configure the DHCP server with the determined configuration
7 information.

1 20. The network of claim 15, wherein the node is the DHCP server.

1 21. An article of manufacture comprising:
2 an electronically accessible medium providing instructions that, when executed by an
3 apparatus, cause the apparatus to
4 reference an electronic file to determine whether a DHCP server interface and a
5 router interface are on the same subnet;
6 determine configuration information for the DHCP server interface based, at least in
7 part, on information in the electronic file; and
8 determine configuration information for the router interface based, at least in part, on
9 information in the electronic file.

1 22. The article of manufacture of claim 21, wherein the electronically accessible medium
2 providing instructions that, when executed by the apparatus, cause the apparatus to reference
3 the electronic file, comprises instructions to cause the apparatus to:
4 reference a virtual map of network resources and associations.

1 23. The article of manufacture of claim 21, wherein the electronically accessible medium
2 providing instructions that, when executed by the apparatus, cause the apparatus to
3 automatically determine configuration information for the DHCP server interface, comprises
4 instructions to cause the apparatus to:
5 determine an IP address of the DHCP server interface; and
6 determine a gateway IP address for the subnet.

1 24. The article of manufacture of claim 21, wherein the electronically accessible medium
2 providing instructions that, when executed by the apparatus, cause the apparatus to
3 automatically determine configuration information for the DHCP server interface, comprises
4 instructions to cause the apparatus to:
5 determine an IP address of the router interface.

1 25. The article of manufacture of claim 21, wherein the electronically accessible medium
2 providing instructions that, when executed by the apparatus, further cause the apparatus to
3 configure the DHCP server with the determined configuration information.

1 26. The article of manufacture of claim 21, wherein the electronically accessible medium
2 providing instructions that, when executed by the apparatus, further cause the apparatus to
3 configure the router with the determined configuration information.

1 27. A network comprising:
2 a router having a router interface associated with a subnet;
3 a Bootstrap Protocol (BOOTP) compliant server having an interface associated with
4 the subnet; and
5 a node coupled with the router and the BOOTP compliant server and having a
6 processor and logic executable thereon to
7 reference an electronic file to determine whether a BOOTP compliant
8 server interface and a router interface are on the same subnet; and
9 automatically determine configuration information for the BOOTP
10 compliant server interface based, at least in part, on information in the referenced data
11 structure; and
12 automatically determine configuration information for the router
13 interface based, at least in part, on information in the referenced data structure.

1 28. The network of claim 27, wherein the referenced electronic file comprises a list of
2 network components having a standardized syntax.

1 29. The network of claim 27, wherein the node coupled with the router and the BOOTP
2 compliant server and having a processor and logic executable thereon comprises logic
3 executable thereon further to
4 programmatically configure the router with the determined configuration information;
5 and to
6 programmatically configure the BOOTP compliant server with the determined
7 configuration information.